

21 January 2015

MEMORANDUM FOR: W/WR1x3 – Claudia Bell

FROM: Tom Clemmons/ FGZ FWX Program Manager
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THROUGH: Brian Klimowski/ FGZ MIC

SUBJECT: Annual Fire Weather Report for 2014

1. OVERVIEW

This year we focused our outreach efforts on the local Ranger Districts and fire weather training. Our primary goal was to educate the local Ranger Districts about the products and services that NWS FGZ can provide to them, determine how FGZ WFO can more effectively meet the Ranger Districts needs for fire weather information, and provide fire weather training to increase fire fighter weather safety awareness.

The 2014 fire season in northern Arizona was characterized by an extended dry period (Jan-Jun) with mostly low to moderate red flag RH-wind events in the spring. Spot forecast numbers increased again this year mainly due to the previous year (2013) October U.S. government shutdown that impacted the fall peak burning season. A little under half of the spot forecasts resulted from wildfires. A good number of the wildfire spot forecasts were in support of wildland fire use fires. Red flag warning verification scores this year improved slight over the previous year's numbers, with most notable improvements in FAR and CSI.

Consistent dry weather conditions from January through May with above normal temperatures contributed to a large wildfire that consumed 21,227 acres of land in Coconino County. On May 20th, 2014 the Slide Wildfire was started in Oak Creek Canyon roughly 7 miles north of Sedona, Arizona. This fire was likely human caused and resulted in at least the evacuation of a 100 homes and businesses in Oak Creek Canyon, and camp grounds in the canyon.

Fire Weather Forecast Product Summary:

	2014	2013
Spot Forecasts:	480	<i>(306)</i>
Fire Weather Watches:	152	<i>(126)</i>
Red Flag Warnings:	244	<i>(194)</i>

2. QUARTERLY WEATHER SUMMARY

JAN-MAR: January was among the warmest on record for northern Arizona due to persistent high pressure along the west coast of the United States. As a result, precipitation was much below normal, with some areas amongst the driest Januaries on record. In February, average monthly temperatures were much warmer than normal, and precipitation was well below normal. In early March a much need Pacific storm system brought precipitation into the region, however the rest of the month remained fairly dry with above normal temperatures.

APR-JUN: April and May was typical of springtime with long periods of dry and breezy weather that resulted in critical fire weather conditions. Overall, temperatures were near to slightly above normal. Precipitation was below normal for April, however May recorded well below average precipitation, with many stations reported less than 50% of average monthly precipitation. June is historically our driest month, and June 2014 saw very dry conditions with zero to trace precipitation amounts reported. Several low pressure troughs brought windy conditions and multiple day critical fire weather events. The bulk of our Fire Weather Watches and Red Flag Warnings were issued during the spring quarter.

JUL-SEP: The summer monsoon season developed right on time in July with near record setting rainfall from Jul-Sep. Flagstaff reported 12.73 inches of rainfall for the 3 month period, which is the 5th wettest rainfall total for our 115 year record. Jul-Sep rainfall amounts varied from 110-225% of normal. The heaviest rainfall occurred across Yavapai, southern Coconino, northern Gila, into southern Apache, and southern Navajo counties. Temperatures were below normal for the areas that received heavy rainfall. North of the Mogollon rim and over northeast Arizona, temperatures were slightly above normal with average to less than average precipitation.

OCT-DEC: October was much warmer and drier than normal across northern Arizona. November was mostly characterized by unseasonably warm and dry weather. December was warmer and wetter than average. Overnight low temperatures were well above average, due mainly to high humidity and cloud cover during the first half of the month. Precipitation amounts were generally well above the 30-year normal, with some locations recording 200% or more of normal precipitation. A much colder system brought widespread heavy snow on New Year's Eve, and the first real snow pack for the season.

3. RED FLAG WARNING VERIFICATION FOR 2014:

Total Red Flag Warnings: 244
Correct Warnings: 174
Incorrect Warnings: 70
Unwarned Events: 7

	2014	2013
Probability Of Detection(POD):	0.96	0.95
False Alarm Rate(FAR):	0.29	0.35
Critical Skill Index(CSI):	0.69	0.63
Average Lead Time:	20hr 51min	25hr 05min

4. SPOT FORECAST SUMMARY

Wildfire forecasts:	206
Prescribed Burn forecasts:	271
Search & Rescue forecasts:	3
Hazmat:	0
Total:	480

5. INCIDENT METEOROLOGIST DISPATCHES FOR 2014

Our IMET's...

Tom Clemmons provided on-site support to:

No Assignments 0 days

Mark Stubblefield, provided on-site support to:

Slide Fire, AZ (Coconino N.F.) May 21-30 10 days

Number of IMET Dispatches: 1

Number of IMET Dispatch days: 10

6. FIRE WEATHER TRAINING ASSIGNMENTS

Course	Date	Agency
Fire Behavior	Jan 28	Northern Arizona University School of Forestry
Fire Weather Refresher	Feb 19	Kaibab and Coconino National Forest Grand Canyon NP
S-290	Feb 25	Hopi Fire Management Students
S-390	March 9	Prescott (Wildfire Academy)
S-290	Apr 9	Navajo Fire Management Students
Fire Weather Refresher	May 5	Fire Lookout, NFS
S-290	May 19-20	Williams R.D., Kaibab NF
S-290 Refresher	May 19-20	Mormon Lake Hotshots

7. FIRE WEATHER OUTREACH MEETING SUMMARY

- Joint Fire Science Program Meetings (Monthly)
- Climate Change Presentation (virtual) for 50 member of the research & operational land management community in the Southwest (Feb)
- RT-130, USFS, Fire Season Outlook (Mar)
- Fire Weather Briefing, Apache Sitgreaves NF, Management (Mar)
- Fire Weather Briefing, Apache Sitgreaves NF, Alpine R.D. (Apr)
- Fire Weather Briefing, Apache Sitgreaves NF, Springerville R.D. (Apr)
- Fire Weather Briefing, Apache Sitgreaves NF, Lakeside R.D. (Apr)
- Fire Weather Briefing, Apache Sitgreaves NF, Black Mesa R.D. (Apr)
- Board Meeting Joint Fire Science Program (SW Consortium), Albuquerque (Apr)
- Meeting with SWCC Predictive Services (USFS), Albuquerque (Apr)
- Coconino NF Seasonal Fire Interagency Meeting, (Apr)
- Fire Weather Meeting, Kaibab NF, BIA, Kanab Fire, North Kaibab R.D. (May)
- Kaibab NF, Office Tour (Jun)
- SW Consortium - Joint Fire Science (Jul)
- Kaibab NF, Safety Talk